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ABSTRACT

This booklet describes the Daily Production Reports subsystem of the School Food Management System, a computer program package developed as one part of a family of educational management systems. The Daily Production Reports system produces two major types of reports on a daily basis. Business Analysis Reports display all food service costs, as well as expected and actual cash receipts. Functional Management Reports display detailed data about each food item served at each cafeteria and are useful in analyzing students' food preferences. The booklet is organized into two sections--a brief general description and a user's guide, which provides a detailed explanation of how to use the programs. Numerous examples of various program functions, input, and output are presented throughout the booklet. (Author/JG)

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FOOD MANAGEMENT SYSTEMS — DAILY PRODUCTION REPORTS

EA 007 354

PROJECT SIMU-SCHOOL

DALLAS COMPONENT 2

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FOOD MANAGEMENT SYSTEM -- DAILY PRODUCTION REPORTS: GENERAL DESCRIPTION AND USERS GUIDE

Research Report No. 75-620

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February, 1975

EXECUTIVE SUMMARY

Objectives of the Project: The Dallas Independent School District contains 171 school cafeterias reporting to 13 group managers. Food is provided for breakfast, lunch, and special events. The Food Management System is a system of computer programs oriented to the needs of these school cafeterias and the management staff.

The Daily Production Reports is a subsystem of the Food Management System which produces two major types of reports:

1. Business Analysis (profit and loss) Reports

2. Functional Management (food servings) Reports.

Two levels of reports are generated corresponding to the two levels of management. The first level of reports brings together all cafeterias which are in the same group, that is, all cafeterias reporting to one group manager. The second level of reports brings together all group reports giving an over-all district summary.

The primary business analysis report is the "Daily Performance Report" which displays food costs, labor costs, other costs, and total costs. The exact cash which should have been received for each item sold is automatically calculated, summed together, and displayed as "expected cash." The difference between expected cash and the banked cash is reported as "cash discrepancy" and is useful in spotting losses. Both free and purchased meal tickets are reported, government subsidies are calculated, and efficiency indexes are determined.

The "Daily Report of Low Performing Units" identifies those cafeterias with low efficiency ratings.

The major functional management report is the "Combined Daily Servings Report" which shows the quantity and expected cash income of each plate and a la carte item dispensed or sold at each cafeteria each day. Both breakfast items and lunch items are included. This report is useful in analyzing the daily preferences of the various school populations for the 34 different food items which are sold each day.

SCHOOL FOOD MANAGEMENT SYSTEM
GENERAL DESCRIPTION

1. SYNOPSIS

The School Food Management System (FMGT) brings to the school system food manager the same computer management tools and techniques which are so extensively used in the business management of commercial enterprises. However, it is oriented to the peculiar needs of school cafeterias and the operating constraints under which they must function.

It is equipped to operate equally well with either a large number of individual kitchens which prepare and dispense food for only their own cafeterias, or for a plurality of Base/Satellite operations in which one Base Kitchen prepares the food and distributes it to several Satellite Cafeterias. It is equipped to operate with food vendor suppliers who deliver their own goods or with warehouses which store government-supplied commodities and then require the school district to obtain deliveries as required.

The computer programs for FMGT are written in COBOL.

2. INPUT REQUIREMENTS

The basic input document is the DAILY PERFORMANCE and DAILY PORTION SHEET. One such sheet is filled out by each cafeteria manager each day. The data on these sheets are:

1. Appended to the previous days' data to create the year-to-data history tape.
2. Used to create the daily production reports.

Under the pilot testing in 20 school cafeterias this input document has undergone many revisions in its format design in order to make it easy to fill out, to be self explantory, and to be unambiguous. This document records Type A

plate lunches (those with milk), plate lunches without milk, and a la carte items sold. It records adult and child milk sales (and plates) separately for government subsidy reports. It also contains information regarding the cash received, and keeps track of the meal tickets received and sold (including the subsidized free-meal tickets) for lunch as well as breakfast. Other input documents are required but not on a daily basis. They are updating sheets for the:

1. Portion Cost and Selling Price File
2. Cafeteria (Serving Unit) File
3. Supervisor (Group) File

Since there are seldom any changes to these files the number of input documents for them is very small.

3. FUNCTIONAL DESCRIPTION

Each daily input sheet can contain sufficient data to fill 5 punched cards (if breakfast and lunch are both reported). Consequently there are extensive error-detection, cross-corelation, and "reasonableness" tests to pinpoint any mistake or omission in the keypunching or the data. When these are detected they are printed out on a "reject sheet" in such a manner that a clerk only has to fill in the missing blanks and re-submit it for keypunching.

The input data is used to generate daily business management reports and detail serving portion reports. The creation of the year-to-date history tape is not yet programmed but will be the next task accomplished. From this tape the weekly, monthly, quarterly, etc. data can be extracted to create reports and analyses.

4. MAJOR REPORTS

Two major types of reports are produced:

1. the business analysis (profit and loss) reports
2. the functional management (food servings) reports

Instead of the usual daily, weekly, semi-monthly, monthly, quarterly, semi-yearly and yearly reports FMGT employs a different philosophy. It only creates two kinds of reports:

1. Daily Reports
2. Multi-Day Reports

For Multi-Day Reports you simply tell FMGT the starting and ending dates. It them ext acts all data between those dates (inclusive) and produces the reports. Thus it can create weekly, bi-weekly, monthly, quarterly, etc. reports (starting at any desired day). This feature makes FMGT very flexible. All such reports require the use of the year-to-date history tape (which will be the next task to be accomplished).

Because the school district contains so many (171) school cafeterias an intermediate layer of managers (called Group Managers) are required. Approximately 13 (Serving Unit) cafeteria managers report to each Group Manager.

Because there are two levels of management there are, therefore, two levels of reports generated. The lower level of reports bring together all cafeterias which are in the same "group" (all cafeterias which report to one group manager). The upper level of reports bring together all "group" reports which in effect constitutes the overall school district report.

4.1 BUSINESS ANALYSIS REPORTS

The primary business analysis report is Report Number 1: the "Daily Performance Report for Group XXX" shown in Figure 4.1-A. Each cafeteria's performance is reported on a separate line with a "Group Total" at the bottom of each column. (For business purposes the "satellite" cafeteria data is included in its appropriate "base" cafeteria statistics.) Separate columns for Food Cost, Labor Cost, Other Costs, and Total Costs are provided. The exact cash which should have been received for each item sold is automatically calculated and summed together as "expected cash." (This varies from school to school since elementary schools charge lower prices than do secondary schools). The differenc between "expected cash" and the "banked cash" (which the cafeterias report) is reported as "cash discrepancy" and is useful in spotting lossess. Two kinds of meal tickets are reported. L-29 tickets are those purchased (if desired) by the students. L-30 tickets are the free subsidy meal tickets issued to needy students. The cash equivalent of the L-29 meal tickets received is used to augment the actual cash received from the sale of the food portions to generate the Adjusted Cash Income.

The amount of government subsidy is then calculated for the:

1. Free milk dispensed
2. Child a la carte milk sold
3. Free L-30 breakfast plates dispensed
4. Free L-30 lunch plates dispensed
5. Child (Type A) plates with milk sold

This is calculated daily for each cafeteria. Then it is added to the Adjusted Cash Income to create the "Adjusted Income" for the report. From this value and the "Total Costs" the actual profit (or loss) is calculated for each cafeteria.

DATE 02-21-75 DALLAS INDEPENDENT SCHOOL DISTRICT FOOD SERVICES REPORT NR 1
PAGE 13

CONDENSED DAILY PERFORMANCE REPORT FOR GROUP 012 ON 01-08-75

UNIT NR	FOOD COST	LABOR COST	OTHER COST	TOTAL COST	--C A S H-- BANKED	DISCREP	--L-29-- SLD	RCV	L-30 RCVD	GOVRMNT SUBSIDY	ADJUSTED INCOME	PROFIT	ADJINC /HOURS	FOOD/ ADJINC	LABOR/ ADJINC	OTHER/ ADJINC	EFF
101	154.19	119.27	3.60	276.06	224.75	- 54.24	30	10	138	113.35	330.10	51.04	7.099	.4732	.3613	.0109	537
209	134.37	77.83	1.60	213.80	169.22	- 32.13	57	19	88	73.00	227.02	13.22	7.567	.5919*	.3428	.0070	704
216	165.98	81.29	2.80	246.47	180.69	- 22.48	48	16	57	53.46	221.35	- 28.32	6.416	.7499*	.3672	.0108	336
218	191.29	97.08	2.80	291.17	256.90	- 13.70	18	6	35	53.77	307.47	16.30	8.310	.6221*	.3157	.0091	560
GROUP TOTAL	647.83	375.47	10.40	1033.70	831.56	- 122.55	149	51	318	293.58	1085.94	52.24	7.337	.5966*	.3458	.0096	505

Figure 4.1-A

In addition to these normal accounting quantities a series of five (5) efficiency indexes are calculated and printed for each cafeteria. They are:

1. Adjusted Income per Labor Hour
2. Food Cost as a Percentage of the Adjusted Income
3. Labor Cost as a Percentage of the Adjusted Income
4. Other Costs as a Percentage of the Adjusted Income
5. Overall business Efficiency Rating

(Items 2, 3, 4 above are actually reported as decimal numbers instead of as percentages).

Items 2, 3, and 4 are then all combined together in a mathematical expression of overall relative efficiency and reported in the right-most column as "EFF." The program contains built-in "threshold" values for these index factors. If any index exceeds its threshold an asterisk is printed beside it for easy visual identification. (In addition, any cafeteria or group which "earns" an asterisk is automatically a candidate for another report: the "Report of Low Performing Units").

In addition to a separate report page for each "Group" there is one overall "School District Daily Performance Report" page shown in Figure 4.1-B. This report employs the same column headings but contains only one line for each "Group." The column totals in this case are the School District totals and the efficiency indexes are the efficiencies for the entire School District.

DATE 02-01-75 DALLAS INDEPENDENT SCHOOL DISTRICT FOOD SERVICES REPORT NR 1
PAGE 15

SCHOOL DISTRICT CONDENSED DAILY PERFORMANCE REPORT FOR 01-08-75

GROUP NR	FOOD COST	LABOR COST	OTHER COST	TOTAL COST	---C A S H--- BANKED	DISCREP	--L-29-- SLD	RCV	L-30 RCVD	GOVRMNT SUBSIDY	ADJUSTED INCOME	PROFIT	ADJINC /HOURS	FOOD/ ADJINC	LABOR/ ADJINC	OTHER/ ADJINC	EFF
001	711.97	355.02	6.80	1073.79	980.30	- 18.64	0	0	92	152.77	1133.07	59.28	8.519	.6284*	.3133	.0060	847
002	393.04	131.75	4.00	688.79	181.98	- 200.51	46	13	643	382.88	551.66	62.87	10.122	.6400*	.2388	.0073	896
003	424.08	220.44	4.80	649.32	455.69	- 22.70	0	0	45	56.51	512.20	- 137.12	8.130	.8280*	.4304	.0094	299
004	105.76	71.69	1.60	179.05	21.35	- 120.29	0	0	306	185.13	206.48	27.43	7.374	.5122*	.3472	.0077	730
005	432.91	224.11	6.00	663.02	587.63	- 140.07	0	0	224	158.80	746.43	83.41	8.679	.5800*	.3002	.0080	718
006	273.93	115.31	3.40	392.64	279.53	- 67.58	9	3	156	150.81	427.64	34.90	9.399	.6406*	.2696	.0084	689
007	104.35	69.49	2.40	176.24	67.85	- 51.66	0	0	55	37.78	105.63	- 70.61	3.521*	.9879*	.6579*	.0227	68
008	426.68	341.16	10.00	777.84	812.36	- 91.02	20	12	204	222.65	1031.66	54.02	7.877	.6073*	.3306	.0097	513
010	248.00	117.44	2.80	368.24	33.80	- 311.62	4	2	949	501.07	533.27	165.03	10.665	.4651	.2202	.0053	1842
011	278.36	167.12	4.40	449.88	244.58	- 138.20	0	0	308	195.96	440.54	- 5.34	7.867	.6228*	.3794	.0100	423
012	647.83	375.47	10.40	1033.70	831.56	- 122.55	149	51	318	293.58	1085.94	52.24	7.337	.5966*	.3458	.0096	505
013	0.00	41.67	1.20	42.87	81.74	1.20	0	0	45	35.49	117.23	74.36	6.513	.0000	.3555	.0102	0
TOTAL	$3206.81	$2230.67	$58.00	$5495.48	$4578.37	- $1083.64	230	81	3345	$2373.43	$6891.95	$400.37	8.176	.6098*	.3237	.0084	603

Figure 4.1-B

4.2 LOW-EFFICIENCY REPORTS

The second major business report is Report Number 4: the "Daily Report of Low-Performing Units" shown in Figure 4.2-A. Any Serving Unit which "earned" an asterisk (see Section 4.1) is a candidate for this report. The data from these Serving Units are subjected to additional evaluation (which compensates for extenuating circumstances) and a more realistic but complicated total efficiency factor is calculated. ne cafeterias which are vindicated by the new calculations are eliminated from the report. The remaining cafeterias are sorted according to their new efficiency rating and printed out (with the lowest efficiency cafeteria appearing at the top of the page). There is no fixed number of cafeterias which must appear on Report Number 4. There is only a maximum restriction: Report 4 is limited to one page.

The new calculations for Report 4 employ 3 special index multipliers (one each for Food/Adjusted Income, Labor/Adjusted Income, and Other/Adjusted Income). There is a different multiplier for each cafeteria. (This data is found in the Serving Unit File). If, for example, a school is so small that it does not really need 3 persons but yet the minimum number of different-skilled persons necessary is 3, then the normal efficiency rating for that cafeteria would be low (due to the small "Adjusted Income"). Therefore the special multiplying factor for that school will be adjusted to conter-act this abnormal condition. Likewise if some kitchens have antequated equipment which require more labor to prepare the food, then its special multiplying factor would be adjusted

DALLAS INDEPENDENT SCHOOL DISTRICT FOOD SERVICES — REPORT NR. 4

MM/DD/YY

DAILY REPORT OF LOW-PERFORMING UNITS

RATING	SCHOOL NAME	TYPE	GROUP NR	UNIT NR	ADJUSTED INCOME	FOOD COST	LABOR COST	OTHER COST	ADJINC /HOURS	COMPENSATED FOOD/ ADJINC	COMPENSATED FAC TOR	COMPENSATED LABOR/ ADJINC	COMPENSATED FAC TOR	COMPENSATED OTHER/ ADJINC	COMPENSATED FAC TOR
XXX.X	XXXXXXXXXXX	X	XXX	XXX	XXXX.XX	XXX.XX	XXX.XX	XXX.XX	XX.XXX	.XXXX	X.XX	.XXXX	X.XX	.XXXX	X.XX
XXX.X	XXXXXXXXXXX	X	XXX	XXX	XXXX.XX	XXX.XX	XXX.XX	XXX.XX	XX.XXX	.XXXX	X.XX	.XXXX	X.XX	.XXXX	X.XX

RATING = 1 / [(COMPENSATED FOOD/ADJINC) x (COMPENSATED LABOR/ADJINC) x (COMPENSATED OTHER/ADJINC)]

COMPENSATED FOOD/ADJINC = (FOOD/ADJINC FROM REPORT #1) x (FOOD COMPENSATING FACTOR FROM SERVING UNIT RECORD)

COMPENSATED LABOR/ADJINC = (LABOR/ADJINC FROM REPORT #1) x (LABOR COMPENSATING FACTOR FROM SERVING UNIT RECORD)

COMPENSATED OTHER/ADJINC = (OTHER/ADJINC FROM REPORT #1) x (OTHER COMPENSATING FACTOR FROM SERVING UNIT RECORD)

SHEET 4 OF 4 COL 29-37

* SCHOOL TYPE = COL 8 ON DAILY PORTION SHEET INPUT FORM

ALL OTHER FIELDS SAME AS REPORT #1 DATA

1. ONLY INCLUDE THOSE UNITS WHICH CONTAINED AN ASTERISK IN REPORT #1
2. THEN OMIT THOSE UNITS WHOSE "RATING" IS GREATER THAN 180.
3. SORT REMAINING UNITS ON ASCENDING VALUES OF "RATING".
4. LIST LOWEST VALUE OF "RATING" FIRST
5. ONLY PRINT ONE PAGE OF THIS REPORT. IGNORE ALL RATINGS WHICH WILL NOT FIT ON FIRST PAGE.

FMGT E1C4-A2 12/20/74

Figure 4.2-A

to compensate for that fact.

4.3 DAILY OPERATING REPORTS

The major daily operating report is Report Number 7: "Combined Daily Servings Report for Group XXX" shown in Figure 4.3-A. This report shows the quantity (and calculated cash income) of each plate or a la carte item dispensed or sold at each cafeteria each day. All Serving Units which report to the same Group Supervisor appear on the same report. Each report covers two pages: 8 cafeterias on the first page with the remaining cafeteria (plus the "group totals") on the second page. The top half of each page pertains to breakfast items while the bottom half of each page pertains to lunch.

There is one 2-page report for each Supervisor Group. In addition there is one 2-page grand total report which summarizes all of the group totals and presents them as the "Combined Servings Report for the School District."

Report Number 7 is useful in analyzing the daily preferences of the various school populations for the 34 different food items which are sold each day.

01/09/75 DALLAS INDEPENDENT SCHOOL DISTRICT FOOD SERVICES REPORT NO. 7

COMBINED DAILY SERVINGS REPORT FOR GROUP 12

	UNIT 101		UNIT 209		UNIT 214		UNIT 218		GROUP TOTALS	
	QTY	$	QTY	$	QTY	$	QTY	$		
BREAKFAST										
PLATE ADULT									2	0.70
PLATE CHILD									349	69.80
MILK ADULT										
MILK CHILD										
FRUIT JUICE										
FRUIT										
JELLY										
TOAST									6	1.50
CEREAL-MILK										
BEEF-BEING									2	0.40
PANCAKES										
SAUSAGE										
---SUBTOTAL										
LUNCH										
----PLATES----										
W/ MILK CHILD	378	151.20	254	101.60	204	81.60	257	102.80	1695	678.00
W/O MILK ADULT	18	7.20	14	5.60	23	9.20	21	8.40	82	32.80
W/O MILK CHILD	45	18.00	22	8.80	37	10.80	51	20.40	145	58.00
EMPLOYEE	9	0.00	3	0.00	7	0.00	7	0.00	33	0.00
MILK ADULT	6	0.72	17	2.04	11	1.32	8	0.96	44	5.28
MILK CHILD	53	4.24	32	2.56	74	4.08	127	10.16	288	23.04
MEAT	53	15.90			125	37.50	89	26.70	273	81.90
SANDWICH			48	14.40					48	14.40
VEGETABLE	163	16.30	89	8.90	111	11.10	198	19.00	561	56.10
SOUP	23	3.45	4	0.60	19	2.85	29	4.35	75	11.25
PLATE DESERT										
.15 DESERT	144	21.60	92	13.80	126	18.90	164	24.60	587	88.05
SALAD	14	2.10	20	3.00	13	1.95	18	2.70	65	9.75
BREAD	94	3.76	95	3.80	84	3.36	162	6.48	440	17.60
BUTTER	28	0.28	40	0.40	28	0.28	110	1.10	208	2.08
SALTINES	95	1.90			37	0.74	32	0.64	397	7.94
FRUIT JUICE	50	5.00	20	2.00	18	1.80	32	3.20	120	12.00
SOFT DRINKS										
COFFEE-TEA	6	0.60	34	3.40	4	0.40			48	4.80
ICE CREAM	178	26.70	82	12.30	151	22.65	141	21.15	625	93.75
DOUGHNUTS										
SWEET ROLLS										
POTATO CHIP										
SNACKS										
CATSUP										
CHEF SALAD										
---SUBTOTAL		278.95		183.20		210.53		252.64		925.32
GRAND TOTAL		278.95		183.20		210.53		252.64		925.32

Figure 4.3-A

SCHOOL FOOD MANAGEMENT SYSTEM

USERS GUIDE

0. INDEX

1.0 Synopsis

2.0 Input Structure

2.1 Input Card Freedoms and Restrictions

2.2 Card Formats

2.3 Card Usage

2.4 Input Error Scan

3.0 System Files

3.1 The Card Image Input File (Temporary)

3.2 The Sorted Input File (Temporary)

3.3 The Primary Daily Input File (Temporary)

3.4 The Daily Sequenced Input File

3.5 The Serving Unit File

3.6 The Supervisor Group File

3.7 The Portion Cost and Selling Price File

4.0 Program Executions

5.0 System Flow

6.0 Daily Reports

6.1 Report #1

6.2 Report #4

6.3 Report #7

1. SYNOPSIS

The School Food Management System (FMGT) brings to the school system food manager the same computer management tools and techniques which are so extensively used in the business management of commercial enterprises. However, it is oriented to the peculiar needs of school cafeterias and the operating constraints under which they must function.

It is equipped to operate equally well with either a large number of individual kitchens which prepare and dispense food for only their own cafeterias, or for a plurality of Base/Satellite operations in which one Base Kitchen prepares the food and distributes it to several Satellite Cafeterias. It is equipped to operate with food vendor suppliers who deliver their own goods or with warehouses which store government-supplied commodities and then require the school district to obtain deliveries as required.

The computer programs for FMGT are written in COBOL.

2. INPUT STRUCTURE

All operations of the School Food Services System (FMGT) are executed using punched card inputs to a batch oriented computing system.

2.1 INPUT CARD FREEDOMS AND RESTRICTIONS

2.1.1 INPUT CARD RESTRICTIONS

There are only a few simple input card format restrictions.

1. Columns 1-2 of all data cards identify the type of input card as follows:

   Col 1-2 = 10 identifies a Daily Portion Servings input card

   Col 1-2 = 20 identifies a Serving Unit input card

   Col 1-2 = 90 identifies a Supervisor Group input card

2. Column 3 of all input data cards identifies the action to be taken by the card as follows:

   Col 3 = 1 means "Add" this card to the data file

   Col 3 = 2 means "Change" the data file according to the contents of this card

3. All input data cards contain a 7-character school identification as follows:

   characters 1-3 = Supervisor Group Number

Note: The school district is divided into "Groups". There is one group supervisor in charge of approximately 13 cafeterias.

character 4 = Type of school where:

1 = High School

2 = Jr. High/Middle School

3 = Elementary School

4 = Special School

character 5-7 = Serving Unit (Cafeteria) Number

This 7-character (numeric) field occurs in:

Col 5-11 for Daily Portion input cards

Col 6-12 for Serving Unit input cards

Col 6-12 for Supervisor Group input cards

4. Since most data input files require more information than can fit on one input card it is necessary to identify the (card) format number. This format number appears in:

Col 80 for Daily Portion input cards

Col 5 for Serving Unit input cards

Col 5 for Supervisor Group input cards

5. Most input cards contain a 6-character (MMDDYY) "date" field as follows:

Col 12-17 for all format numbers of Daily Portion input cards

Col 69-74 of format number 3 of Serving Unit input cards

2.1.2 INPUT CARD FREEDOMS

1. The cards do NOT have to be segregated according to their card types nor according to their format numbers. (No sorting of cards is necessary). The program will automatically sort all card images and accept only the appropriate cards for its file. It will also sort its accepted cards into the appropriate "Add", "Change" sequence, the format sequence, and the date sequence.

2. It is permissable to have:

   A. An "Add" card for a new file item

   B. Several "Change" cards for that new file item

   They may all be intermixed. The sorting will then:

   A. Create the new record from the "Add" card

   B. Change the record in accordance with the "Change" cards (in the order of their date fields) so that the most recently dated change card will be executed last.

3. When submitting a change card it is not necessary to keypunch all fields in the changed card. Any fields which are left blank on the change card will NOT alter the original contents. Only those fields which are non-blank will be changed (to the new contents on the input card). It is not even necessary to submit a change card

for any format which contains no changes. For example, the Daily Portion input normally requires 5 cards to specify the complete file record. If only one field in the record is to be changed it is only necessary to submit a change card for that particular card format (in which case most of the card will contain blanks except the changed field).

Note: All change cards require only a minimum of data in order to locate the correct record in the file. The columns which MUST be present on a change card are:

A. For Daily Portion input cards:

Col 1-17 and 80

B. For Serving Unit input cards:

Col 1-12

C. For Supervisor Group input cards:

Col 1-8

2.2 CARD FORMATS

2.2.0 CARD FORMATS INDEX

2.2.1 Serving Unit Record card format FMGT A1C

2.2.2 Supervisor Group Record card format FMGT B1

2.2.3 Daily Portion Sheet card format FMGT C1KC

2.2.4 Special Banquet card format C1KD

2.2.1 Serving Unit Record card format FMGT A1C

Form A1C contains sufficient data to cover 4 punched cards. The formats for these 4 punched cards are shown in Figures 2.2.1-A thru 2.2.1-D. The first 18 columns of all forms are similar (with column 5 identifying the particular card format number). Some fields are pre-printed with zeros to indicate fields which have been set aside for future expansion.

SIMU-SCHOOL-- Long Range Planning

FORTRAN Coding Form

PROGRAM SERVING UNIT RECORD | GRAPHIC | PAGE 1 OF 4

PROGRAMMER | DATE | PUNCH | CARD ELECTRO NUMBER

HIGH
JR. HIGH / MIDDLE
ELEMENTARY
SPECIAL

STATEMENT NUMBER | FORTRAN STATEMENT | IDENTIFICATION SEQUENCE

ACTIV	GROUP NR	TYPE	UNIT NR	GRP SEQ NR	DLV SEQ NR	NAME OF SERVING UNIT	NAME OF MANAGER
20	01			00	00		

ACTIVITY (1=ADD 2=CHANGE 3=DELETE)

Figure 2.2.1-A

SIMU-SCHOOL-- Long Range Planning

FORTRAN Coding Form

FMGT-A1C-2

SERVING UNIT RECORD

PROGRAMMER

DATE

PUNCHING INSTRUCTIONS

GRAPHIC

PUNCH

PAGE 2 OF 4

CARD ELECTRO NUMBER

STATEMENT NUMBER

FORTRAN STATEMENT

IDENTIFICATION SEQUENCE

HIGH
JR. HIGH/MIDDLE
ELEMENTARY
SPECIAL

ACTIV	GROUP NR	TYPE	UNIT NR	CARD SEQ NR	DLV SCH NR	ADDRESS OF SERVING UNIT MANAGER			
						NUMBER AND STREET	CITY STATE AND ZIP-CODE		PHONE
20	01			00	00				

ACTIVITY (1= ADD 2= CHANGE 3=DELETE)

Figure 2.2.1-B

SIMU-SCHOOL -- SERVING UNIT RECORD — FORTRAN Coding Form — FMGT-A1C-3

PROGRAM / PROGRAMMER / DATE — PUNCHING INSTRUCTIONS — GRAPHIC / PUNCH — PAGE 3 OF 4 — CARD ELECTRO NUMBER

1 = HIGH
2 = JR. HIGH / MIDDLE
3 = ELEMENTARY
4 = SPECIAL

STATEMENT NUMBER | FORTRAN STATEMENT | IDENTIFICATION SEQUENCE

ACTIV	GROUP NR	TYPE	UNIT NR	GRP SEQ NR	DLW SEQ NR	ABREVIATED UNIT NAME	ABREVIATED GROUP NAME	CODES PGM	MENU	SERV	PALE	QTY	SPR	MEAL	BASE	BASE UNIT NR	% RACE WH	BK	OTH	NR LIN SRVL	UPDATE DATE MO	DA	YR	FACT DSH	UST MR	SPR
20	03			00	00			00	00	00	00	00	00											C	00	

ACTIVITY (1 = ADD 2 = CHANGE 3 = DELETE)

MEAL CODE (1 = BREAKFAST ONLY. 2 = LUNCH ONLY 3 = BKFAST AND LUNCH)

BASE CODE (1 = STANDARD UNIT 2 = BASE UNIT 3 = SATELLITE UNIT)

25

Figure 2.2.1-C

SIMU-SCHOOL-- Long Range Planning

FORTRAN Coding Form

PROGRAM SERVING UNIT RECORD

PROGRAMMER

DATE

PUNCHING INSTRUCTIONS

GRAPHIC

PUNCH

PAGE 4 OF 4

CARD SEQUENCE NUMBER

1 = HIGH
2 = JR. HIGH/MIDDLE
3 = ELEMENTARY
4 = SPECIAL

STATEMENT NUMBER | CONT | FORTRAN STATEMENT | IDENTIFICATION SEQUENCE

ACTIV	GROUP NR	TYPE	UNIT NR	GRP SEQ NR	DLV SEQ NR	AVERAGE PLATE SALES	AVERAGE DAILY ATTN	AVERAGE DAILY PATRON	COMPENSATING FACTOR FOOD	FACTOR LABOR	FACTOR OTHERS	FACTOR SPR	NR OF EMPL ACT	NR OF EMPL NEED	LABOR DOLLARS MAX DAY	LABOR DOLLARS MAX WEEK	LABOR DOLLARS MIN DAY	LABOR DOLLARS MIN WEEK	NUMBER OF COOK	NUMBER OF PASTRY	NUMBER OF SALAD	NUMBER OF DISH WASH	NUMBER OF JANITOR	NUMBER OF CASHIER	NUMBER OF SPR	NUMBER OF CLN	CLN KITV	CLN SERV	CLN SPR	SMALL D
20	04			00	00							000													00	00	00	00	00	0

ACTIVITY (1=ADD 2=CHANGE 3=DELETE)

Figure 2.2.1-D

2.2.2 Supervisor Group Record card format FMGT B1

Form B1 contains sufficient data to cover 3 punched cards. The formats for these 3 punched cards are shown as Figures 2.2.2-A thru 2.1.2-C. The first 8 columns of all cards are similar (with column 5 identifying the particular card format number).

FORTRAN Coding Form

FMGT-B1 (1)

PROGRAM: SUPERVISOR GROUP RECORD

PROGRAMMER: DATE:

PUNCHING INSTRUCTIONS: GRAPHIC: PUNCH:

PAGE 1 OF 3

CARD ELECTRIC NUMBER

C	STATEMENT NUMBER	ACTIV	GROUP NR	OMIT	NAME OF SUPERVISOR GROUP	ABREVIATED GROUP NAME	NAME OF SUPERVISOR	IDENTIFICATION SEQUENCE
	9¢	N	¢1	———				

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

N = ACTIVITY (1 = ADD 2 = CHANGE 3 = DELETE)

O = LETTER "OH"
¢ = ZERO
1 = ONE
I = LETTER "EYE"

Figure 2.2.2-A

SIMU-SCHOOL -- Long Range Planning

FORTRAN Coding Form

FMGT-31 (2)

PROGRAM: SUPERVISOR GROUP RECORD | PUNCHING INSTRUCTIONS | GRAPHIC | PUNCH | PAGE 2 OF 3 | CARD ELECTRO NUMBER

PROGRAMMER | DATE

STATEMENT NUMBER	FORTRAN STATEMENT	IDENTIFICATION SEQUENCE

ACTIV	GROUP NR	OMIT	ADDRESS OF SUPERVISOR							PHONE
			NUMBER	AND	STREET	CITY	STATE	ZIP-CODE		
N	M	2								

N= ACTIVITY (1= ADD 2= CHANGE 3= DELETE)

Figure 2.2.2-B

FMGT-B1 (3)

FORTRAN Coding Form

SIMU-SCHOOL-- Long Range Planning

PROGRAM SUPERVISOR GROUP RECORD

PROGRAMMER

DATE

GRAPHIC

PUNCH

PAGE 3 OF 3

CARD ELECTRO NUMBER

IDENTIFICATION SEQUENCE

FORTRAN STATEMENT

STATEMENT NUMBER	CONTINUATION	ACTIV	GROUP NR	OMIT	ANOTHER RESPONSIBLE PERSON NAME	PHONE	TYPE	NR OF SCHOOLS HI	JR	MID	EL	SPL
		9Φ	MΦ3	——								

N = ACTIVITY (1=ADD 2=CHANGE. 3=DELETE)

Figure 2.2.2-C

2.2.3 Daily Portion Sheet card format FMGT C1KC

Form C1KC contains sufficient data to cover 5 punched cards. However. if no breakfasts are served at a school then the 4th and 5th cards are not required. Form C1KC is shown in 'igure 2.2.3-A. The first 17 columns of all cards are identical while Column 80 identifies the particular card format number. Column 18 identifies the type of meal (breakfast, lunch, special banquet). Figure 2.2.3-A shows

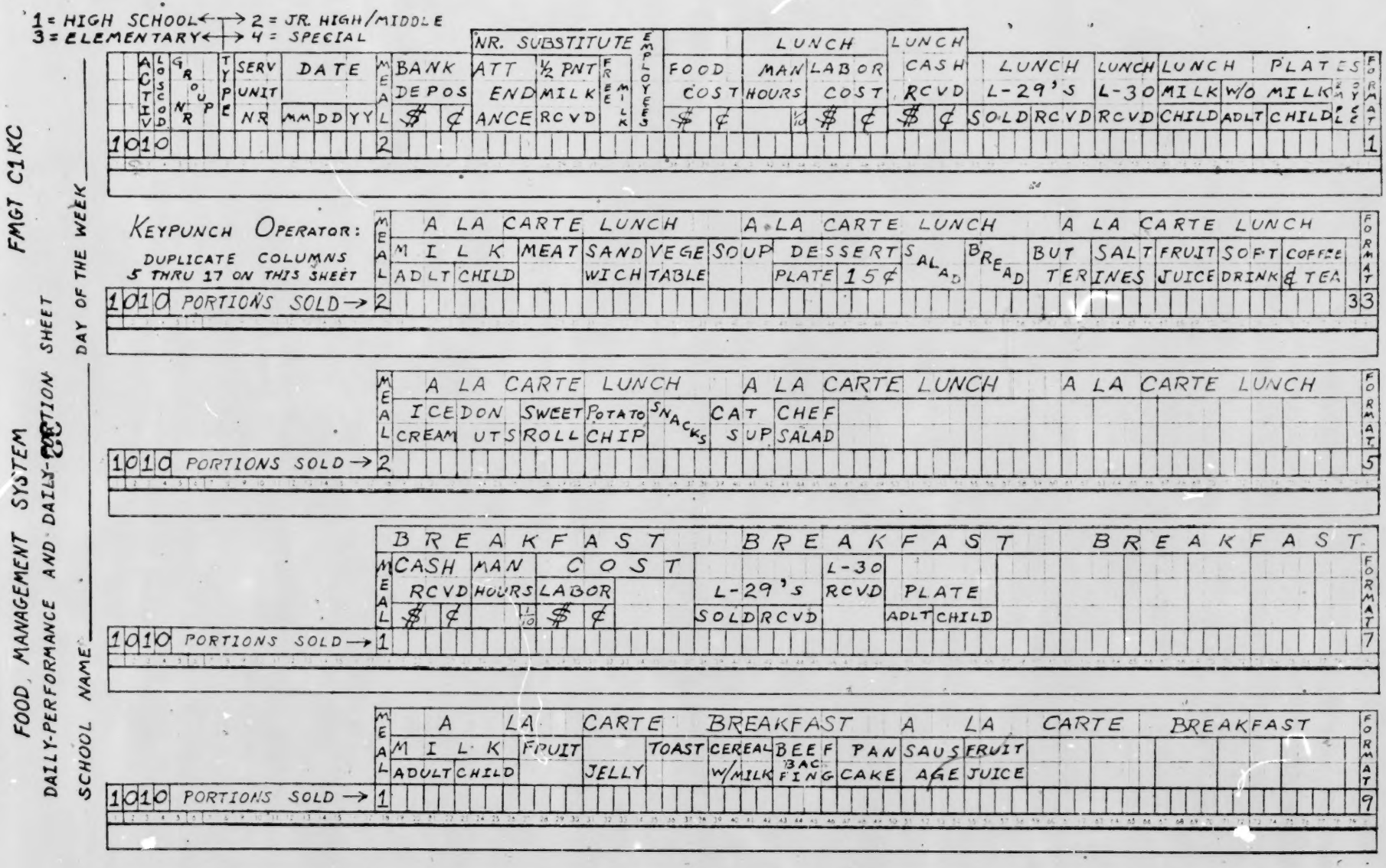

1 = HIGH SCHOOL ↔ 2 = JR. HIGH/MIDDLE
3 = ELEMENTARY ↔ 4 = SPECIAL
FMGT C1 KC
FOOD MANAGEMENT SYSTEM
DAILY PERFORMANCE AND DAILY PRODUCTION SHEET
SCHOOL NAME
DAY OF THE WEEK
KEYPUNCH OPERATOR:
DUPLICATE COLUMNS 5 THRU 17 ON THIS SHEET
NR. SUBSTITUTE EMPLOYEES
LUNCH
LUNCH
ACTIV
LOSCOD
GROUP NR
TYPE
SERV UNIT NR
DATE
MM DD YY
MEAL
BANK DEPOS $ ¢
ATT ENDANCE
½ PNT MILK RCVD
FREE MILK
FOOD COST $ ¢
MAN HOURS
LABOR COST ½ $ ¢
CASH RCVD $ ¢
LUNCH L-29'S SOLD RCVD
LUNCH L-30 RCVD
LUNCH PLATES MILK CHILD
LUNCH PLATES W/O MILK ADLT
LUNCH PLATES W/O MILK CHILD
DAY SEQ
FORMAT
1 0 1 0
2
1
A LA CARTE LUNCH
MILK ADLT
MILK CHILD
MEAT
SAND WICH
VEGE TABLE
SOUP
DESSERT PLATE 15¢
SALAD
BREAD
BUTTERINES
SALT
FRUIT JUICE
SOFT DRINK
COFFEE & TEA
1 0 1 0 PORTIONS SOLD →
2
3
3
A LA CARTE LUNCH
ICE CREAM
DONUTS
SWEET ROLL
POTATO CHIP
SNACKS
CAT SUP
CHEF SALAD
1 0 1 0 PORTIONS SOLD →
2
5
BREAKFAST
CASH RCVD $ ¢
MAN HOURS
LABOR COST ½ $ ¢
L-29'S SOLD RCVD
L-30 RCVD
PLATE ADLT
PLATE CHILD
1 0 1 0 PORTIONS SOLD →
1
7
A LA CARTE BREAKFAST
MILK ADULT
MILK CHILD
FRUIT
JELLY
TOAST
CEREAL W/MILK
BEEF BACON FING
PAN CAKE
SAUSAGE
FRUIT JUICE
1 0 1 0 PORTIONS SOLD →
1
9

Figure 2.2.3-A

a permanent "1" in column 3 (meaning "add"). This number will be crossed out and a "2" written in its place for "change" cards.

Columns 78-79 on card format 1 are used to show the number of "free" plate lunches eaten by the employees. Columns 43-46 on card format 5 show the number of a la carte sales of the (cheaper) desserts which normally are included in a plate lunch while columns 47-50 show the number of the more expensive desserts sold. Currently the total cost of the food ingredients used for breakfasts is included in the overall cost of food ingredients for lunch. However, columns 33-37 on card format 7 are available should you wish to record these costs separately. Since only one bank deposit is made per day per cafeteria both breakfast and lunch cash is combined for that deposit. However, the actual breakfast and actual lunch cash received is reported separately on Col 50-54 of card 1 and Col 19-23 of card 7.

2.2.4 Special Banquet card format FMGT C1KD

Form C1KD is shown in Figure 2.2.4-A. The first 18 columns are similar to the card format in 2.2.3 except that column 18 contains a "3" to identify it as a Special Banquet card and columns 37-41 contain sales tax data.

FMGT C1KD

FOOD MANAGEMENT SYSTEM

SPECIAL BANQUET REPORT

SCHOOL _____ DAY OF THE WEEK _____

ORGANIZATION SERVED _____

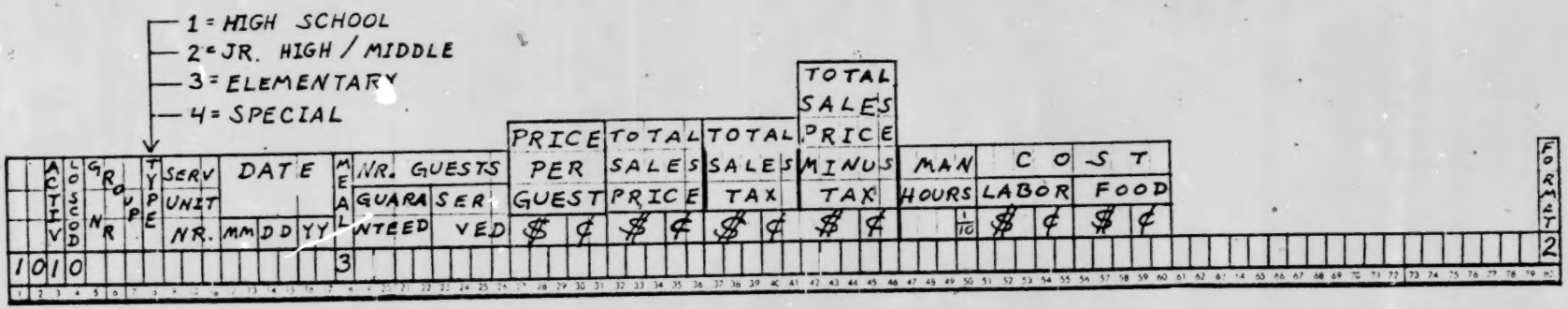


Figure 2.2.4-A

2.2.5 Special Error Correction card format (unnumbered)

Section 2.4.1 describes a special card format which is printed out by the computer when an error is detected which requires correction by a new input card. By filling in the appropriate blanks on that sheet the page thus becomes another keypunch form (mostly pre-printed by the computer) which can be submitted to keypunching for the punching of an updating "change" card. Figure 2.2.5-A illustrates such a format.

PROCESSED 01/29/75

FOOD SERVICES MANAGEMENT
DAILY TRANSACTIONS LISTING

BOOKER T. WASHINGTON

***LUNCH

	SERVING UNIT	DATE	MEAL TYPE	BANK DEPOSIT	ATTDC	MILK RCVD	FREE MILK	SUB EMP	FOOD COST	MAN HOURS	LABOR COST	LUNCH CASH	L-29 SOLD	L-30 RCVD	L-30 RCVD	PLATES C-WITH	PLATES A-W/O	PLATES C-W/O	PLATES EMP	FR MT
	05-11	12-17	18	19-23	24-27	28-31	32-33	34-35	36-40	41-44	45-49	50-54	55-58	59-62	63-66	67-70	71-73	74-77	75-79	80
01-04																				
1010	004	3238	01 09 75	2	20.32		.448			70.66	28.0	75.98	20.32			313	( ) ****	11	317	5	1

	SERVING UNIT	DATE	MEAL TYPE	MILK ADULT	MILK CHILD	MEAT	SAND WICH	VEGE TABLE	SOUP	DESSERTS PLATE	DESSERTS .15	SALAD	BREAD	BUT TER	SALT INES	FRUT JUCE	SOFT DRINK	COFE &TEA	FR MT
	05-11	12-17	18	19-22	23-26	27-30	31-34	35-38	39-42	43-46	47-50	51-54	55-58	59-62	63-66	67-70	71-74	75-77	80
01-04																			
1010	004	3238	01 09 75	2	5		3		21		33				18			3	3

	SERVING UNIT	DATE	MEAL TYPE	ICE CREAM	DO NUTS	SWEET ROLLS	POTATO CHIPS	SNACKS	CAT SUP	CHEF SALAD		FR MT
	05-11	12-17	18	19-22	23-26	27-30	31-34	35-38	39-42	43-46	←KEYPUNCH COLUMNS	80
01-04												
1010	004	3238	01 09 75	2	30							5

THE ABOVE RECORD WAS REJECTED FOR ERRORS IN THE INDICATED FIELDS--PLEASE CORRECT AND RE-SUBMIT

TOTAL MILK IN ERROR--

MISSING VALUE
(CHILD PLATE LUNCH WITH MILK)

WHEN THE MISSING VALUE IS WRITTEN ON THIS SHEET THIS SHEET WILL BE GIVEN TO KEYPUNCHING. THEY WILL KEYPUNCH A NEW CARD.

Figure 2.2.5-A

2.3 Card Usage

Card format FMGT A1C is used to create and update the Serving Unit file.

Card format FMGT B1 is used to create and update the Group Supervisor file.

Card format FMGT C1KD is used to update the Daily Sequenced Input file (which is ultimately merged into the year-to-date history file).

Card format FMGT C1KC is used to create and update 2 different files:

1. The Daily Sequenced Input file
2. The Portion Servings Cost and Price file

2.3.1 Daily Sequenced Input file Data

If card columns 1-2 = 10 on Figure 2.2.3-A and if card columns 5-7 and 9-11 are non-zero the data pertains to portions sold and is used to augment the Daily Sequenced Input file. With the exception of columns 19-37 on card format 7 all columns 19-78 on formats 3, 5, 7 and 9 are interpreted as integral units of portions sold for each category of food indicated.

2.3.2 Portion Servings Cost and Price file Data

If card columns 1-2 = 10 on Figure 2.2.3-A and if card columns 5-7 and 9-11 are all zero the data pertains to costs and prices and is used to augment the Portion Servings Cost and Price file. Column 8 is used to differentiate between costs and prices as follows:

0 = Not used

1 = High School Sales Price

2 = Jr. High/Middle School Sales Price

3 = Elementary School Sales Price

4 = Special School Sales Price

5 = High School Cost

6 = Jr. High/Middle School Cost

7 = Elementary School Cost

8 = Special School Cost

9 = Not used

With the exception of columns 19-37 on card format 7 all columns 19-78 on formats 3, 5, 7, and 9 are interpreted as decimal fractions of one dollar (i.e. there is an assumed decimal point just to the left of the left-most character in each data field). In most cases this permits the expression of costs and prices to one one-hundredth of a penny. Columns 55-79 of card format 1 also contain cost and price data.

2.4 INPUT ERROR SCAN

The Daily Portion sheet inputs are created as records in a Daily History tape file to which are appended each day's input data. This tape file thus becomes, in effect, the year-to-date history tape. With such massive amounts of data the concern for accurate data becomes of paramount importance. Thus an extensive series of cross-corelation, error-detection, and data-omission tests are applied to each record that is added to the file. Each detected error is classified as either:

A Fatal Error, or

A Non-Fatal Error.

Each type of error causes an error warning to be printed. However, a non-fatal error permits the record to be added

to the file while a fatal error prohibits the record from being added to the file. A transaction copy of each card image is available to be printed at the discretion of the person initiating the input data execution.

2.4.1 DATA ERROR PRINTOUT

When an input error is detected the whole input record is printed out as annotated card images, which show card columns and data field names. When corrections are to be made to this (erroneous) data it is only necessary to write the new (correct) information in those particular fields on the error print-out sheet and submit the sheet for keypunching. (This eliminates the filling out of keypunch forms for data corrections.)

3.0 SYSTEM FILES

The FMGT system when eventually extended to incorporate inventory control, automatic ordering, menu creation, and multi-day reporting will require approximately 14 different files. However, for the creation of the present daily Reports #1, #4, and #7 the following 7 different files are required:

1. The Card Image Input File (temporary)
2. The Sorted Input File (temporary)
3. The Primary Daily Input File (temporary)
4. The Daily Sequenced Input File
5. The Serving Unit File
6. The Group Supervisor File
7. The Portion Cost and Selling Price File

3.1 The Card Image Input File (Temporary)

The Card Image Input File is a temporary file of card images as read from the input card deck. The records are in no particular sequential order and may or may not contain errors. This file is created using the data on format type FMGT C1K.

3.2 The Sorted Input File (Temporary)

The Sorted Input File is a temporary file of card images sorted by:

File Type	Col. 1-2
Date	Col. 12-17
Group Number	Col. 5-7
Type	Col. 8
Serving Unit	Col. 9-11

Loss Code	Col. 4
Activity	Col. 3
Format Number	Col. 80

This file is created by sorting the entire contents of the Card Image Input File.

3.3 The Primary Daily Input File (Temporary)

The Primary Daily Input File consists of fixed length (approximately 200 character) records. The source of these records are the contents of the Sorted Input File. All Sorted Input File records which pertain to the same Serving Unit for the same date are combined into one Primary Daily Input File record. This record is subjected to a series of error-detecting tests. If a fatal error is detected the record is NOT included in the Daily Input File. If a non-fatal error or if no errors are detected the record IS included in the Daily Input File.

Using information contained in the Portion Cost and Selling Price File the:

1. OTHER COSTS, and
2. EXPECTED CASH are calculated

and inserted into the record.

Then the GOVERNMENT SUBSIDY and ADJUSTED INCOME are also calculated and inserted into the record.

From the Serving Unit File two information fields unique to that cafeteria (Serving Unit) are also transferred to the record. They are:

BASE CODE

BASE UNIT NUMBER

3.4 The Daily Sequenced Input File

The Daily Sequenced Input File consists of the identical records in the Primary Daily Input File except that they have now been sorted on:

- Date
- Group
- Type
- Base Code
- Base Unit Number
- Serving Unit
- Loss Code
- Activity

Each Daily Sequenced Input File record contains the information about portions sold (or dispensed) at one cafeteria on one day. It is NOT necessary that all records pertain to the SAME DAY. While most records will pertain to the most recent reporting day there can be back-dated records which are being inserted today because:

1. They were inadvertantly omitted from a previous day.
2. On a previous day they may have been forcibly rejected from the system due to a fatal error which had been detected on the input cards.
3. A previous day's input may have been accepted but a warning may have been printed that the (non-fatal error) data was suspect and should be verified. Verification may have shown that there was, indeed, an inaccurate data value in one or more of the fields. Hence a new, or correcting card is being submitted.

4. Due to a backlog in keypunching or computer breakdown, etc. it may have been necessary to insert two (or more) days worth of transactions at one time.

3.5 The Serving Unit File

The Serving Unit File is a small auxiliary data file containing one record per (cafeteria) Serving Unit. Each record contains the pertinent data unique to that unit which may be required for special reports. Certain data fields are extracted and inserted into every record in the Primary Daily Input File. Other data fields are used as compensating factors when preparing Report #4. This file is created and updated using the data on format type FMGT A1.

3.6 The Group Supervisor File

The Group Supervisor File is a small, seldom used auxiliary data file containing one record per Supervisor Group. Each record contains the pertinent data unique to that group that may be required for special reports. This file is created and updated using the data on format type FMGT B1.

3.7 The Portion Cost and Selling Price File

The Portion Cost and Selling Price file contains two kinds of records:

Portion Cost records , and

Portion Selling Price records

Each of these records contains all of the costs (or all of the selling prices, as applicable) for every item (portion) which is sold on the cafeteria serving line. Each record bears a "first effective on" date and all old records remain in the

file. This permits research reports on the actual costs and prices of food items sold during any previous time periods. Reports for "today" will utilize the most recent cost records and most recent selling price records.

Since different grades of schools charge different prices, etc. it is necessary to maintain 4 different cost and 4 different selling price records (one each for:

1. High Schools
2. Junior High/Middle Schools
3. Elementary Schools
4. Special Schools)

It is NOT necessary that the "effective dates" be the same for any of the 4 cost or any of the 4 selling price records. They can all be independent of each other. The data from this file is used to calculate and insert EXPECTED CASH and OTHER COSTS into each record in the Primary Daily Input File.

This file is created and updated using the data on format type FMGT C1K.

Note: Not all data on format type FMGT C1K is cost or price data. Cost data on that format is identified by the presence of zeros in columns 5 thru 7 and 9 thru 11 while simultaneously there is a 5, 6, 7, or 8 (for the 4 kinds of schools) in column 8. Selling price data on format FMGT C1K is identified by the presence of zeros in columns 5 thru 7 and 9 thru 11 while simultaneously there is a 1, 2, 3, or 4 (for the 4 kinds of schools) in column 8. Any other data on FMGT C1K is used to create another file (the Primary Daily Input file).

4.0 PROGRAM EXECUTIONS

Each input data card contains sufficient information to identify the file which it is intended to update. However, there is not just one file update program. Instead, there are four (4) update programs (one for each of the 4 files). During the execution of any of these 4 file update programs, if an extraneous card is detected which is NOT an update card for that particular file, the card is rejected and an error transaction is printed out.

All daily reports (#1, #4, #7) require the use of the Daily Sequenced Input File. In addition, Report #4 requires the use of the Serving Unit File.

5.0 SYSTEM FLOW

Figure 5.0-A shows the system flow chart for the creation of the 3 daily reports.

1. The input data is hand written on either:

   FMGT C1K Special Banquet Report,

   FMGT C1K Daily Portion Sheet, or

   the computer (annotated) card image reject print out sheet (See 2.4.1).

2. The unsorted keypunch cards are used to create the card image file.

3. The card images are sorted to bring all cards for one Serving Unit for one date together.

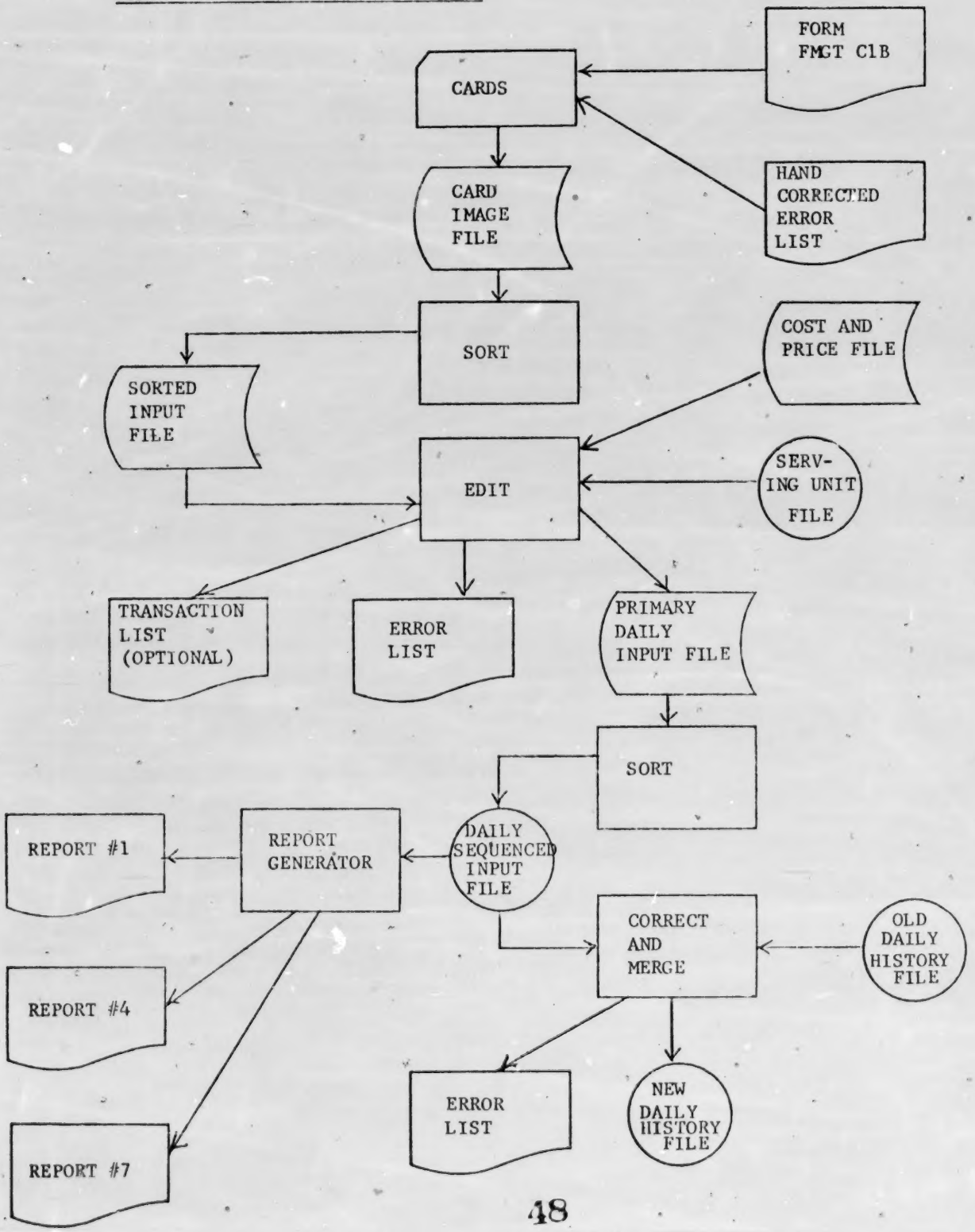
4. The card images for one Serving Unit for one date for one activity (add/change) are then combined into one record. The record is tested for illegal omissions, values above or below specified limits, illegal dates, and various cross-correlation tests. "Fatal error" records are rejected but "Non-Fatal error" and non-error records are accepted. All errors (fatal or non-fatal) are reported on the error list (in a format suitable for re-submission to keypunching). A transaction list is either printed or not printed in accordance with a programmable switch.

5. Data from the Portion Cost and Price File is used to calculate values which are inserted into the record.

Figure 5.0-A

FOOD MANAGEMENT DAILY SYSTEM

DAILY DATA FLOW AND FLOW DIAGRAM



6. Data from the Serving Unit File is extracted and inserted into the record.
7. These records are stored as the Primary Daily Input File.
8. This file is sorted to place all "satellite" Serving Units behind their "base" Serving Units and to arrange the records in date sequence. The sorted file then becomes the Daily Sequenced Input File.
9. From this file a report generator creates daily Reports #1, #4, and #7.

6.0 DAILY REPORTS

The 3 daily reports produced by the School Food Management System are:

1. Report #1: Condensed Daily Performance Report
2. Report #4: Daily Report of Low-Performing Units
3. Report #7: Combined Daily Servings Report

6.1 Report #1

The primary business analysis report is Report Number 1: the "Daily Performance Report for Group XXX" as shown in Figure 6.1-A. Each cafeteria's performance is reported on a separate line with a "Group Total" at the bottom of each column. (For business purposes the "satellite" cafeteria data is included in its appropriate "base" cafeteria statistics.) Separate columns for Food Cost, Labor Cost, Other Costs, and Total Costs are provided. The exact cash which should have been received for each item sold is automatically calculated and summed together as "expected cash." (This varies from school to school since elementary schools charge lower prices than do secondary schools.) The difference between "expected cash" and the "banked cash" (which the cafeterias report) is reported as "cash discrepancy" and is useful in spotting losses. Two kinds of meal tickets are reported. L-29 tickets are those purchased (if desired) by the students. L-30 tickets are the free subsidy meal tickets issued to needy students. The cash equivalent of the L-29 meal tickets received is used to augment the actual cash received from the sale of the food portions to generate the Adjusted Cash Income.

DATE 02-01-75 DALLAS INDEPENDENT SCHOOL DISTRICT FOOD SERVICES REPORT NR 1
PAGE 13

CONDENSED DAILY PERFORMANCE REPORT FOR GROUP 012 MN 01-08-75

UNIT NR	FOOD COST	LABOR COST	OTHER COST	TOTAL COST	--C A S H-- BANKED	DYSCREP	--L-29-- SLD	RCV	L-30 RCVD	GOVRMNT SUBSIDY	ADJUSTED INCOME	PROFIT	ADJINC /HOURS	FOOR/ ADJINC	LABOR/ ADJINC	OTHER/ ADJINC	EFF
101	156.19	119.27	3.60	279.06	224.75	- 54.24	30	10	138	113.35	330.10	51.04	7.099	.4732	.3613	.0109	537
209	134.37	77.83	1.60	213.80	169.22	- 32.13	57	19	88	73.00	297.02	13.22	7.567	.5919*	.3428	.0070	704
216	165.98	81.29	2.40	249.67	180.69	- 22.48	48	16	57	53.46	221.35	- 28.32	6.416	.7499*	.3672	.0108	336
218	191.29	97.08	2.80	291.17	256.90	- 13.70	14	6	35	53.77	307.47	16.30	8.310	.6221*	.3157	.0091	560
GROUP TOTAL	647.83	375.47	10.40	1033.70	831.56	- 122.55	149	51	318	293.58	1085.94	52.24	7.337	.4966*	.3458	.0096	505

Figure 6.1-A

The amount of government subsidy is then calculated for the:

1. Free milk dispensed
2. Child a la carte milk sold
3. Free L-30 breakfast plates dispensed
4. Free L-30 lunch plates dispensed
5. Child (Type A) plates with milk sold

This is calculated daily for each cafeteria. Then it is added to the Adjusted Cash Income to create the "Adjusted Income" for the report. From this value and the "Total Costs" the actual profit (or loss) is calculated for each cafeteria.

In addition to these normal accounting quantities a series of five (5) efficiency indexes are calculated and printed for each cafeteria. They are:

1. Adjusted Income per Labor Hour
2. Food Cost as a Percentage of the Adjusted Income
3. Labor Cost as a Percentage of the Adjusted Income
4. Other Costs as a Percentage of the Adjusted Income
5. Overall business Efficiency Rating

(Items 2, 3, 4 above are actually reported as decimal numbers instead of as percentages).

Items 2, 3, and 4 are then all combined together in a mathematical expression of overall relative efficiency and reported in the right-most column as "EFF." The program contains built-in "threshold" values for these index factors. If any index exceeds its threshold an asterisk is printed beside it for easy visual identification. (In additon, any cafeteria or group which "earns" an asterisk is automatically a candidate for another report: the

"Report of Low Performing Units").

In addition to a separate report page for each "Group" there is one overall "School District Daily Performance Report" page shown in Figure 6.1-B. This report employs the same column headings but contains only one line for each "Group". The column totals in this case are the School District totals and the efficiency indexes are the efficiencies for the entire School District.

6.2 Report #4

The second major business report is Report Number 4: the "Daily Report of Low-Performing Units" shown in Figure 6.2-A. Any Serving Unit which "earned" an asterisk (see Section 6.1) is a candidate for this report. The data from these Serving Units are subjected to additional evaluation (which compensates for extenuating circumstances) and a more realistic but complicated total efficiency factor is calculated. The cafeterias which are vindicated by the new calculations are eliminated from the report. The remaining cafeterias are sorted according to their new efficiency rating and printed out (with the lowest efficiency cafeteria appearing at the top of the page). There is no fixed number of cafeterias which must appear on Report Number 4. There is only a maximum restriction: Report 4 is limited to one page.

The new calculations for Report 4 employ 3 special index multipliers (one each for Food/Adjusted Income, Labor/Adjusted Income, and Other/Adjusted Income). There is a different multiplier for each cafeteria. (This data is found in the Serving

DATE 02-01-75

DALLAS INDEPENDENT SCHOOL DISTRICT FOOD SERVICES

REPORT NR 1
PAGE 15

SCHOOL DISTRICT CONDENSED DAILY PERFORMANCE REPORT FOR 01-08-75

GROUP NR	FOOD COST	LABOR COST	OTHER COST	TOTAL COST	--CASH-- BANKED	DISCREP	--L-29-- SLD	RCV	L-30 RCVD	GOVRMNT SUBSIDY	ADJUSTED INCOME	PROFIT	ADJINC /HOURS	FOOD/ ADJINC	LABOR/ ADJINC	OTHER/ ADJINC	
001	711.97	355.02	6.80	1073.79	980.30	- 18.64	0	0	92	152.77	1133.07	59.28	8.519	.6284*	.3133	.0080	8
002	353.04	131.75	4.00	488.79	181.98	- 200.51	46	13	643	382.88	551.66	62.87	10.122	.6400*	.2388	.0073	8
003	424.08	220.44	4.80	649.32	455.69	- 22.70	0	0	45	56.51	512.20-	137.12	8.130	.8280*	.4304	.0094	2
004	105.76	71.69	1.60	179.05	21.35	- 120.29	0	0	306	185.13	206.48	27.43	7.374	.5122*	.3472	.0077	7
005	432.91	224.11	6.00	663.02	587.63	- 140.07	0	0	224	158.80	746.43	83.41	8.679	.5800*	.3002	.0060	71
006	273.93	115.31	3.60	392.84	279.53	- 67.58	9	3	156	150.81	427.64	34.80	9.399	.6406*	.2696	.0084	68
007	104.35	69.49	2.40	176.24	67.85	- 51.66	0	0	55	37.78	105.63-	70.61	3.521*	.9879*	.6579*	.0227	6
008	626.68	341.16	10.00	977.84	812.36	- 91.02	20	12	204	222.65	1031.66	54.02	7.877	.6073*	.3306	.0097	51
010	248.00	117.44	2.80	368.24	33.80	- 311.62	6	2	949	501.07	533.27	165.03	10.665	.4651	.2202	.0053	1842
011	278.36	167.12	4.40	449.88	244.58	- 138.20	0	0	308	195.96	640.54-	5.34	7.867	.6228*	.3794	.0100	423
012	647.93	375.47	10.40	1033.70	831.56	- 122.55	149	51	318	293.58	1085.94	52.24	7.337	.5966*	.3458	.0096	505
013	0.00	41.67	1.20	42.87	81.74	1.20	0	0	45	35.49	117.23	74.36	6.513	.0000	.3555	.0102	0
TOTAL	$4202.91	$2230.67	$58.00	$6491.58	$4578.37	- $1983.64	230	81	3345	$2373.43	$6891.95	$400.37	8.176	.6098*	.3237*	.0084	603

Figure 6.1-B

DALLAS INDEPENDENT SCHOOL DISTRICT FOOD SERVICES

REPORT NR. 4

MM/DD/YY

DAILY REPORT OF LOW-PERFORMING UNITS

RATING	SCHOOL NAME	TYPE	GROUP NR	UNIT NR	ADJUSTED INCOME	FOOD COST	LABOR COST	OTHER COST	ADJINC /HOURS	COMPENSATED FOOD/ ADJINC	FACTOR	COMPENSATED LABOR/ ADJINC	FACTOR	COMPENSATED OTHER/ ADJINC	FACTOR
XXX.X	XXXXXXXXXXX	X	XXX	XXX	XXXX.XX	XXX.XX	XXX.XX	XXX.XX	XX.XXX	.XXXX	X.XX	.XXXX	X.XX	.XXXX	X.XX
XXX.X	XXXXXXXXXXX	X	XXX	XXX	XXXX.XX	XXX.XX	XXX.XX	XXX.XX	XX.XXX	.XXXX	X.XX	.XXXX	X.XX	.XXXX	X.XX

RATING = 1 / [(COMPENSATED FOOD/ADJINC) X (COMPENSATED LABOR/ADJINC) X (COMPENSATED OTHER/ADJINC)]

COMPENSATED FOOD/ADJINC = (FOOD/ADJINC FROM REPORT #1) X (FOOD COMPENSATING FACTOR FROM SERVING UNIT RECORD)

COMPENSATED LABOR/ADJINC = (LABOR/ADJINC FROM REPORT #1) X (LABOR COMPENSATING FACTOR FROM SERVING UNIT RECORD) ←

COMPENSATED OTHER/ADJINC = (OTHER/ADJINC FROM REPORT #1) X (OTHER COMPENSATING FACTOR FROM SERVING UNIT RECORD) ←

SHEET 4 OF 4 COL 29-37 ←

* SCHOOL TYPE = COL 8 ON DAILY PORTION SHEET INPUT FORM

ALL OTHER FIELDS SAME AS REPORT #1 DATA

1. ONLY INCLUDE THOSE UNITS WHICH CONTAINED AN ASTERISK IN REPORT #1
2. THEN OMIT THOSE UNITS WHOSE "RATING" IS GREATER THAN 180.
3. SORT REMAINING UNITS ON ASCENDING VALUES OF "RATING".
4. LIST LOWEST VALUE OF "RATING" FIRST
5. ONLY PRINT ONE PAGE OF THIS REPORT. IGNORE ALL RATINGS WHICH WILL NOT FIT ON FIRST PAGE.

FMGT E1C4-A2 12/2974

Figure 6.2-A

Unit File). If, for example, a school is so small that it does not really need 3 persons but yet the minimum number of different-skilled persons necessary is 3, then the normal efficiency rating for that cafeteria would be low (due to the small "Adjusted Income"). Therefore the special multiplying factor for that school will be adjusted to counteract this abnormal condition. Likewise if some kitchens have antequated equipment which require more labor, to prepare the food, then its special multiplying factor would be adjusted to compensate for that fact.

6.3 Report #7

The major daily operating report is Report Number 7: "Combined Daily Servings Report for Group XXX" shown in Figure 6.3-A. This report shows the quantity (and calculated cash income) of each plate or a la carte item dispensed or sold at each cafeteria each day. All Serving Units which report to the same Group Supervisor appear on the same report. Each report covers two pages: 8 cafeterias on the first page with the remaining cafeterias (plus the "group totals") on the second page. The top half of each page pertains to breakfast items while the bottom half of each page pertains to lunch.

There is one (2-page) report for each Supervisor Group. In addition there is one (2-page) grand total report which summarizes all of the group totals and presents them as the "Combined Servings Report for the School District.

01/09/75

DALLAS INDEPENDENT SCHOOL DISTRICT FOOD SERVICES REPORT NO. 7

DAILY SERVINGS REPORT FOR GROUP 19

	COMBINED UNIT 101		UNIT 209		UNIT 214		UNIT 218								GROUP TOTALS	
	QTY	$	QTY	$	QTY	$	QTY	$								
BREAKFAST																
PLATE ADULT															2	0.70
PLATE CHILD															349	69.80
MILK ADULT																
MILK CHILD																
FRUIT JUICE																
FRUIT																
JELLY																
TOAST																
CEREAL-MILK															6	1.50
BEEF-B-BING																
PANCAKES															2	0.40
SAUSAGE																
---SUBTOTAL																
LUNCH																
----PLATES----																
W/ MILK CHILD	378	151.20	258	103.40	204	81.60	257	102.80							1695	678.00
W/O MILK ADULT	18	7.20	14	5.60	23	9.20	21	8.40							82	32.80
W/O MILK CHILD	85	14.00	23	2.80	27	10.80	51	20.40							145	58.00
EMPLOYEE	9	0.00	3	0.00	7	0.00	7	0.00							33	0.00
MILK ADULT	6	0.72	17	2.04	11	1.32	8	0.96							44	5.28
MILK CHILD	53	4.24	32	2.56	76	6.08	127	10.16							288	23.04
MEAT	93	15.90			125	37.50	89	26.70							273	81.90
SANDWICH			48	18.40											48	18.40
VEGETABLE	163	16.30	89	8.90	111	11.10	190	19.00							561	56.10
SOUP	23	3.45	4	0.60	19	2.85	29	4.35							75	11.25
PLATE DESERT																
.15 DESERT	143	21.60	92	13.80	126	18.90	164	24.60							587	88.05
SALAD	14	2.10	20	3.00	13	1.95	18	2.70							65	9.75
BREAD	94	3.76	95	3.80	84	3.36	162	6.48							440	17.60
BUTTER	28	0.28	40	0.40	28	0.28	110	1.10							208	2.08
SALTINES	95	1.90			37	0.74	32	0.64							397	7.94
FRUIT JUICE	50	5.00	20	2.00	18	1.80	32	3.20							120	12.00
SOFT DRINKS																
COFFEE-TEA	6	0.60	34	3.40	4	0.40										
ICE CREAM	178	26.70	82	12.30	151	22.65	141	21.15							48	4.80
DOUGHNUTS															625	93.75
SWEET ROLLS																
POTATO CHIP																
SNACKS																
CATSUP																
CHEF SALAD																
---SUBTOTAL		278.95		183.20		210.83		252.64								925.32
GRAND TOTAL		278.95		183.20		210.83		252.64								925.32

Figure 6.3-A

Report Number 7 is useful in analyzing the daily preferences of the various school populations for the 34 different food items which are sold each day.